

A NEW MEALYBUG PARASITE (HYMENOPTERA: ENCYRTIDÆ)

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As Compere has pointed out (Univ. Calif. Pubs. in Ent. 8 (1): 15-22, 1947), there is a compact group of encyrtid genera related to *Anagyrus*, all of which, with one exception, are parasitic on mealybugs. While I was working out the identity of some mealybug parasite material submitted for identification, I segregated one form which was closely related to *Anagyrus* but could not be placed generically. Study of the literature and the material of the family Encyrtidæ in the U. S. National Museum collection finally showed that this form represented an undescribed genus. Several years ago Mr. A. B. Gahan placed in the National Museum collection specimens of this same form, which he had also segregated as an unknown genus. The material he studied had likewise been reared from mealybugs.

Anathrix, new genus

DESCRIPTION.—Head lenticular in shape; mandibles minute, each with two acute teeth, these teeth approximately of equal size; maxillary palp with four segments, labial with three; antennæ inserted near clypeus, slightly below level of ventral margins of compound eyes; a broadly-rounded, vertical ridge present between antennal bases; scape slender, cylindrical, its apex reaching level of vertex; pedicel slender, elongate; funicle with six segments, first segment one-half as long as scape and much longer than pedicel, following segments much shorter than first, club 3-segmented, sutures obscure; malar space narrow; eyes hairy; frons shagreened and with fairly dense, setose punctures distributed over the surface. Pronotum transverse, each postero-lateral margin deeply incised to fit projecting anterior angle of prepectus; mesoscutum shining; axillæ connate on meson, a short, longitudinal carina at their points of junction, this carina extending a short distance onto scutellum; surface of scutellum very minutely and closely pitted and dull, entire scutellum rather densely pubescent and one pair of long bristles borne near posterior angle; forewing with marginal vein longer than wide, shorter than stigmal vein and slightly longer than postmarginal; an asetose area extending obliquely posteriorly from stigmal vein; stout, black bristles present on outer apical margin of mesotibia and on ventral and outer sides of midtarsal segments; two spurs at apex of each hind tibia, one long, the other short. Propodeum with a patch of dense, short hair near

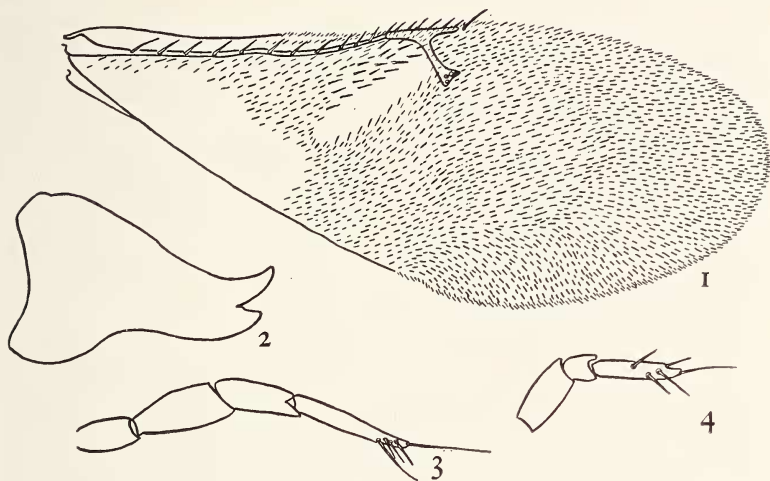
either lateral margin, spiracles round; gaster with most of dorsal surface occupied by last tergite, cerci migrated anteriorly almost to base of gaster; ovipositor not projecting, apices of sheaths blunt, usually entirely hidden.

Type.—*Anathrix argyrus*, new species.

This genus is somewhat intermediate between *Anagyryus* Howard and *Leptomastix* Foerster. It agrees with *Leptomastix* in having the axillæ connate and medianly carinate, but differs in having both the marginal vein of the forewing and the antennæ much shorter; it agrees with *Anagyryus* in having the marginal vein short in relation to the stigmal vein, the frons being shagreened, and the scutellum bearing one pair of bristles, but it is distinguished from that genus by having the antennal scape slender and cylindrical. The scape in *Anagyryus* is flattened and greatly widened. The genus *Fulgoridicida* Perkins is closely related to *Anathrix*, but has the antennal pedicel twice as long as the first funicle segment. The genus *Anagyrodes* Girault has characters rather similar to those of *Anathrix*, but the two may be differentiated in that *Anagyrodes* has the postmarginal vein twice as long as the stigmal and the hind tibia has two short spurs. *Ericydnella* Girault is also characterized as being related to *Anathrix*, but the axillæ are not connate and medianly carinate. I have not seen authentically determined specimens of the genera *Anagyrodes* or *Ericydnella*, but have based my conclusions about them from the characterizations given in their original descriptions. Both were described from the Australian region.

In Compere's key to the genera related to *Anagyryus* (l. c., p. 17), this new form runs out near *Heterarthrellus* Howard. Compere had not, however, seen specimens of that genus and stated in his discussion that it was difficult to place it from the description alone. Howard's genus is represented by the type and a fairly good series of specimens of the genotype species in the National Museum collection. Study of these specimens showed that *Heterarthrellus* has the entire thoracic notum minutely pitted and dull, the antennal scape is almost as broad as in *Anagyryus*, the postmarginal and stigmal veins of the forewing are approximately equal in length, and the axillæ are not connate on the meson. As will be seen from the characterization given above for *Anathrix*, it differs in all these characters.

In Ashmead's key to the genera of the Encyrtidæ (Carnegie Mus. Mem. 1 (4): 286-311, 1904), *Anathrix* will run to the couplet separating *Anagyrus* and *Anusia* Foerster, from both of which it is excluded by its slender antennal scape. In Girault's key (Queensland Mus. Mem. 4: 179-183, 1915), it runs to *Fulgoridicida*. In Mercet's key (Fauna Ibérica, Himenópteros, Fam. Encyrtidos, Madrid, pp. 60-73, 1921), it runs to



EXPLANATION OF FIGURE

1, Forewing; 2, Mandible; 3, Maxillary palp; 4, Labial palp.

Ericydnus Walker; in that genus the wings are usually wanting, but when they are present the postmarginal vein in each forewing is much longer than the marginal.

***Anathrix argyrus*, new species**

Female: Length, 1.8-2.0 mm., mandible with dorsal tooth, fig. 2, slightly longer and more acute than ventral tooth; maxillary palp, fig. 3, with first and third segments short, subequal in length, second segment twice as long as either, fourth segment twice as long as third; labial palp, fig. 4, with first and third segments subequal in length, second segment only one-third as long as third. Antennal scape cylindrical, slightly enlarged toward apex; lengths of parts of antenna of holotype in mm.: scape 0.41, pedicel 0.12, first funicle segment 0.21, second 0.12, third 0.12, fourth 0.11, fifth 0.09, sixth 0.08, club 0.24. Interantennal protuberance entirely asetose, extending from clypeal margin to a point halfway between clypeus and anterior ocellus, ventral half of this protuberance smooth, rest of its surface minutely reticulated; face

shagreened, setose pits distributed in a rather haphazard manner over most of the surface, setæ arranged in rows along either lateral margin of interantennal protuberance and transversely along ventral margins of either antennal socket; eyes with dense, short hair; length of malar space three-eighths as great as height of compound eye; width of face at dorsal end of interantennal protuberance one and one-half times as great as maximum anterior width of a compound eye; ocellular line one-third as long as post-ocellar line; line from dorsal margin of anterior ocellus to vertexal carina two and one-quarter times as long as line from posterior margin of lateral ocellus to vertexal carina.

Mesoscutum and tegulæ rather densely clothed with fairly long hair, the pubescence borne by axillæ and mesoscutellum shorter, finer, and slightly more dense; surface of mesoscutum shining, almost smooth, showing very faint surface reticulations; tegulæ with minute, elongate alveoli; axillæ and mesoscutellum very closely and minutely pitted, dull; pleura minutely alveolar. Forewing, fig. 1, with a vaguely-defined, small, brown cloud at inner margin of stigmal vein; marginal vein three times as long as wide, stigmal vein one and one-half times as long as marginal, postmarginal two-thirds as long as marginal; each hind wing with three hamuli, submarginella vein with one bristle near base; a few setæ borne on ventral surface of each mid coxa, hind coxa bearing hair on outer and ventral surfaces.

Each lateral area of propodeum densely covered by woolly hair, spiracle located three times its own diameter from anterior margin of propodeum. Length of gaster slightly greater than length of alitrunk; first visible tergite of gaster rather densely clothed with short hair anteriorly and laterally, postero-median area glabrous; last tergite sparsely clothed with longer hair, this tergite occupying more than two-thirds of dorsal surface of gaster; each cercus bearing four long bristles, three stout and one slender; gastral sternites sparsely hairy laterally and on median ventral area.

Head and body black with silvery hair and setæ; antennal scape tan, pedicel and funicle black, club white; forewings faintly infumated, subhyaline, hindwings hyaline; all coxæ black, basal half to two-thirds of each femur black, apices of femora tan, tibiæ and tarsi tan, claws black.

Male.—Unknown.

Type locality.—Berryville, Va. Types.—U. S. N. M. no. 61201.

Described from 9 specimens, as follows: Holotype female, Berryville, Va., May 6, 1945, reared from *Ferrisiana virgata* (Cockerell), D. W. Clancy; Paratypes: Winchester, Va., May 12, 1944, reared from *Ferrisiana virgata* (Cockerell), D. W. Clancy, 6 ♀; Brownsville, Tex., Feb. 8, 1936, collected on cotton, P. A. Glick, 1 ♀; Ste. Anne Sorel, P. Q., June 16, 1950, A. Robert, 1 ♀. All types deposited in the U. S. National Museum collection.